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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/177,815	10/23/1998	KYOUNG-SU KIM	1363.1004/MD	3622

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EXAMINER

BROWN, RUEBEN M

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 06/20/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/177,815

Applicant(s)

KIM ET AL.

Examiner

Reuben M. Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 26 March 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 1998 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the controller recited at least in claim 5, must be shown or the feature(s) canceled from the claim(s). The specification refers to a controller 219 [0046], however there is no item 219 shown in Fig. 2. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Fig. 2 includes SC1-SC6, however, in the specification these control signals are referred to as CS1-CS8, respectively. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-10 & 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Considering amended claim 1 and claim 19, the claimed feature is not enabled, 'adjusting the extracted synchronous signal to a synchronous signal of *the* digital broadcasting', emphasis added.

Examiner reads amended claim 1 to include a selection of an analog broadcasting channel *or* a digital broadcasting channel, receiving and processing an analog broadcasting signal *or* digital broadcasting signal, dependent upon the corresponding channel being selected.

Therefore, since in the instance that an analog broadcasting signal is being received, then 'the' digital broadcasting signal is not being received, the system would not be enabled to synchronize the analog broadcasting signal to 'the' digital broadcasting signal.

Examiner's position is supported by applicant's response on page 6, first paragraph that confirms that both the digital broadcasting channel and analog broadcasting channel are not selected and received. Applicant states, "The digital broadcasting channel or the analog

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broadcasting channels are not selected and received as indicated by the Office Action. Rather, *one of the channels* is selected. Similar arguments apply to the remaining claims”, emphasis added. Thus applicant’s response appears to confirm that the claimed invention operates by selectively receiving a digital broadcast signal or an analog broadcast signal. While a digital broadcast signal is being received, an analog broadcast signal is not being received, and vice versa. Even though the hybrid receiver is enabled to receive both analog and digital broadcast signals, both types are not simultaneously received.

Claims 2-4 depend from claim 1 and are likewise treated.

Considering claim 5, the instant claim includes the limitation of, “a video encoder unit to encode the MPEG processed video signal and the additional information into an encoded analog video signal according to a second control signal of the plurality of control signals and ‘the’ synchronous signal. Similar to claim 1, the instant claim is read to either select/receive an analog broadcast signal or a digital broadcast signal, but not both at the same time. Therefore, since in the instance that a digital broadcast signal is being received and processed, there would be no analog broadcast signal received and processed, thus ‘the’ synchronous signal, which is derived from the analog broadcast signal, would not be present and is therefore not enabled.

Claims 6-10 depend from claim 5 and are likewise treated.

*Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 5-18 & 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Bestler, (U.S. Pat # 5,638,112).

Considering amended claim 5, the instant claim is analyzed as best understood, in light of the above 112 rejection. Bestler teaches a hybrid digital broadcast receiver that selectively tunes and receives either an analog or digital TV channel, see col. 2, lines 3-11. The claimed controller to determine whether an analog or digital channel is selected and generate a plurality of control signals is met by the operation of the microprocessor 18; col. 2, lines 3-5.

Particularly, Bestler teaches receiving an analog or digital signal according to which channel is tuned. If an analog channel is selected/received, then an analog signal is processed by

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the analog demodulator 28. However, if a digital channel is selected/received, then the digital signal is processed by the digital demodulator 34.

The claimed synchronous separation unit to extract a synchronous signal from the analog broadcasting signal, and separate it into a video and audio signal is met by the operation of the analog demodulator 28, col. 3, lines 10-15, since the extracted composite video signal inherently includes numerous synchronous signals, such as the horizontal and vertical sync signals.

The additional information process unit to generate additional information according to a first control signal is met by the OSD generator 60; col. 3, lines 32-62. Fig 1 shows a control signal from the microprocessor 18, to the OSD 60. The claimed video encoder for encoding processed MPEG video signal and the additional information into an encoded analog signal is met by the operation of the mixer 64 (which combines the MPEG video and additional data, col. 3, lines 44-47) and the NTSC encoder 80 (which creates an NTSC format analog video signal), col. 4, lines 18-23.

The claimed video mix unit to mix analog video signal from the air tuner and the encoded analog video signal is met by mixer 82, col. 4, lines 25-30. The D/A to convert MPEG audio to MPEG processed analog is met by the D/A 42. The audio selection unit to select and transmit MPEG processed analog signal and analog audio signal to a third control signal is met by composite audio encoder 52, col. 3, lines 5-10.

Considering claim 7, see col. 4, lines 29-34.

Considering claims 8 & 14, the CV decoder 72 separates the analog signal into YUV format, which then transmits the analog signal to the A/D converter 74.

Considering claims 9-10 & 16, Bestler teaches that graphics and text may be from the generator, other than received and stored in RAM, col. 4, lines 29-32.

Considering claim 11, the claimed elements of digital broadcasting receiver that correspond with subject matter mentioned above in the rejection of claim 5, are likewise treated.

Considering claim 12, the claimed feature reads on the D/A 42.

Considering claim 13, the claimed feature reads on col. 4, lines 10-20.

Considering claim 15, the claimed feature reads on the OSD generator 60.

Considering claim 17, the claimed feature reads on the decoder 72, col. 3, lines 61-67.

Considering amended claim 18, the claimed broadcast receiver which receives a digital broadcasting signal and an analog broadcasting signal, comprising a tuning unit to selectively



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tune the digital or analog signal, is met by the operation of the hybrid analog/digital STB of Bestler, Abstract & col. 1, lines 5-41. The hybrid analog/digital STB of Bestler selectively receives and tunes either or both analog and digital TV signals; see col. 2, lines 3-11 & col. 4, lines 2-6.

As for the claimed processing unit to process the digital or analog broadcasting signals in accordance with the selection by the tuning unit, and to synchronize phases of the digital and analog broadcasting signals upon the tuning unit changing selection between the digital and analog broadcasting signals, Bestler teaches that the composite video signal from an analog TV signals is converted to a digital form and normalized, col. 3, lines 61-65). The normalizer 70 may comprise a scan converter that converts either or both an analog and digital signal to the desired display format. This is done to more accurately display a TV signal according to the desired display format, thereby appropriately increasing the perceived resolution to the desired display format; see col. 4, lines 6-24. Hence, the disclosed scan conversion process reads on the claimed feature of synchronizing the phases of the digital and analog signals.

Considering claim 20, the claimed features that correspond with subject matter mentioned above in the rejection of claim 18, are likewise analyzed. As for the additional claimed feature of a video mix unit to selectively input the output of the processed digital broadcasting signal with additional information and the processed analog broadcasting signal with the additional information, the disclosure of Bestler reads on this claimed feature, col. 4, lines 25-30. In particular, Bestler teaches that additional information such as text or graphics may accompany

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the video signals and are processed & mixed with the composite video signals by the mixer 64; see col. 3, lines 32-61. Bestler also teaches that the linear mixer 82 may be used to provide graphics or text that may be downloaded and stored in RAM analog video.

Regarding the further claimed limitation that the additional information corresponding to a digital broadcasting signal and the additional information corresponding to an analog broadcasting signal are the same, it also disclosed that the these text or graphics from OSD 60 or downloaded MPEG signal, may also be supplied to the digital broadcast signal, see col. 3, lines 32-54, as well as the analog TV signals, col.3, lines 55-60.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bestler, in view of Pritchard, (U.S. Pat # 4,555,723).

Considering claim 6, Bestler does not teach separating the luminance/chrominance after the mixer 82. However, Pritchard teaches that the very well known technique of luminance/chrominance separation has the advantage of enhancing detail information and reducing distortions, (col. 1, lines 28-31 & col. 2, lines 52-68). It would have been obvious for one of ordinary skill in the art at the time the invention was made, to provide luminance/chrominance separation of the mixed signal at least in order to improve the quality of the video signal, as taught by Pritchard.

### *Response to Arguments*

9. Applicant's arguments filed 3/27/2003 have been fully considered but they are not persuasive. With respect to claim 18, applicant argues on page 6 that "Bestler fails to teach or suggest a unit to select a digital broadcasting signal or an analog broadcasting signal". Examiner respectfully disagrees and points out that Bestler is directed to a hybrid receiver that is enabled to selectively, tune and receive either an analog or digital channel. In particular, col. 2, lines 3-5, discloses a "tuner 14 for tuning a selected channel, which may comprise either an analog TV channel or a digital TV channel". Furthermore, Bestler discusses in col. 2, that depending upon which type of channel is selected, a corresponding analog signal or digital signal is processed; col. 2, lines 12-13 & col. 2, lines 31.

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Applicant also argues on page 7, that “nothing in Bestler teaches or suggests ‘synchronize phases of the digital and analog broadcasting signal’, as recited in claim 18”. Examiner also respectfully disagrees. In col. 4, lines 2-10, it is disclosed that normalizer 70 may include a scan converter for converting either or both the received analog or digital signal to a desired display format”. This process inherently includes phase synchronization, since this process is required in order to display a digital TV signal in an analog format, as is disclosed in Bestler. Furthermore, Bestler discloses that mixer 82 mixes the analog composite video signal from demodulator 2, with the output from NTSC encoder 80 in IC 78, (wherein the input to IC 78 may be a digital TV signal). Thus in at least one instance, a originally digital TV signal is synchronized with an analog composite TV signal, thereby reading on the claimed subject matter.

On page 8, applicant requests a reference to support the Official Notice taken in a rejection to claim 20, “at the time the invention was made, it was known in the art for multiple TV signals to comprise the same information”. However, applicant’s response is moot in view of the new grounds of rejection for the instant claim.

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Schein Teaches the transmission of the same program over multiple TV transmission formats, including antenna, cable, DSS, etc., col. 6, lines 30-40.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
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**or faxed to:**

(703) 872-9314, (for formal communications intended for entry)

**Or:**

(703) 872-9314 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")


*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).*

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Reuben M. Brown whose telephone number is (703) 305-2399.  
The examiner can normally be reached on M-F (8:30-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Andrew I. Faile can be reached on (703) 305-4380. The fax phone numbers for the  
organization where this application or proceeding is assigned is (703) 872-9314 for regular  
communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the receptionist whose telephone number is (703) 305-4700.

Reuben M. Brown

  
ANDREW FAILE  
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